50. (New) The method according to claim 49, wherein said placental mammal is selected from the group consisting of cattle, sheep, goats, water buffalo, camels and pigs.

REMARKS

Reconsideration of this application and entry of the foregoing amendments are respectfully requested.

The claims have been revised to define the invention with additional clarity. Support for the claims is found throughout the application. The present claims correspond to the prior claims as follows:

New	Prior
31	30
32	3
33	4
34	5
35	6
36	7
37	8
38	9
39	10
40	14
41	15
42	17
43	18
44	20
45	21
46	29
47	22
48	23
49	24
50	25

Claims 1-11, 13-22 and 28-30 stand rejected as allegedly representing obviousness-type double patenting over claims of USP 6,171,827. Withdrawal of the rejection is submitted to be in order for the reasons that follow.

The claims as presented, which are drawn to a production method, require that a first procollagen be produced in a cell that expresses and assembles a second procollagen. No such cell is suggested by the claims of USP 6,171,827. Further, the present claims require the expression in the cell of nucleic acid sequence(s) that encode(s) a pro-α chain for assembly into the first procollagen, which nucleic acid sequence(s) do/does not encode pro-α chain(s) that co-assemble with the pro-α chains that assemble to form the second procollagen. Clearly, nothing in the cited patent claims are suggestive of this further requirement.

In view of the foregoing, it is submitted that withdrawal of the rejection is in order and same is requested.

Claims 1-11, 13-22 and 28-30 stand rejected under 35 USC 112, first paragraph. Withdrawal of the rejection is submitted to be in order for the reasons that follow.

At the outset, attention is directed to the fact that claim 30 (now claim 31) parallels the language of USP 6,171,827 as regards the definitions of the first and second moieties. For that reason alone, the rejection must fail.

Further, Applicant submits that the Examiner is actually incorrect from the standpoint that the Walmsley paper does not show that mini-collagens cannot assemble. Indeed, they do and the somewhat isolated sentence to which the Examiner refers, taken out of context, relates to experimental conditions that have been manipulated to prevent secretion of the mini-collagen construct. The remainder of the paper (and, in fact, earlier published work from Applicant's laboratory) demonstrates that this construct does assemble to form triple helical molecules.

The first paper referred to by the Examiner, Myllyharju, does demonstrate that one particular construct having an altered C-propeptide does not assemble in insect cells but Applicant submits that no basis exists for extending this observation to all constructs having modified C-propeptides (it is noted that the triple helical domain used in these experiments (the alpha-2 chain from type I collagen) has a low content of hydroxyproline residues).

Additionally, the Examiner is reminded that the present claims are directed to a method of production, not to collagen molecules *per se* (the Examiner is further reminded that the Office found allowable the polypeptides of USP 6,171,827). Applicant submits that the subject disclosure fully enables the claimed production method and that to require limitation of the claims as the Examiner has suggested would be to unduly restrict Applicant in the scope of protection to which he is rightly entitled.

Reconsideration is requested.

Claims 23-25 stand rejected under 35 USC 112, first paragraph. The rejections are traversed.

The Examiner's comments suggest that he is of the view that since the application does not include a working example of the claimed transgenics, Applicant was not in possession of that invention. 35 USC 112, first paragraph, merely requires adequate written description of the invention, not a working example. Applicant clearly had possession, as evidenced by the disclosure and the fact that claims 23-25 are originally presented claims.

As regards the rejection based on lack of enablement, the Examiner appears to appreciate that the creation of transgenics at the relevant date was a matter of routine. Given that the polypeptides of the claims are enabled

(which is clear from the issuance of USP 6,171,827), and the present application teaches the host cells to be used (those producing a second procollagen), nothing further should be required.

No relevance is seen of the Examiner's comments relating to phenotypes.

Reconsideration is requested.

Claims 1-11, 13-25 and 28-30 stand rejected under 35 USC 112, second paragraph. Withdrawal of the rejection is submitted to be in order in view of the above-noted claim revisions (the Examiner is urged to note that new claim 31 requires "expressing … a nucleic acid sequence). Reconsideration is requested.

Claims 1, 2, 6, 11 and 13-22 and 29 stand rejected under 35 USC 102(a) and (e) over Prockop et al. Withdrawal of the rejection is in order in view of the above claim revisions.

Claims 1-11, 13-22 and 28-30 stand rejected under 35 USC 102(e) as allegedly being anticipated by Bullied et al. The rejection is traversed.

The Examiner appears to have overlooked the requirements in the claims relating to the nature of the host cells used and the nucleic acid sequence expressed (see comments above responsive to the rejection based on

obviousness-type double patenting). These requirements are not taught by citation. Accordingly, reconsideration is requested.

This application is submitted to be in condition for allowance and a Notice to that effect is requested.

Respectfully submitted,

NIXON & VANDERHYE, P.C.

By_____
Mary J. Wilson
Reg. No. 32,955

MJW:tat

1100 North Glebe Road
8th Floor
Arlington, Virginia 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100